

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



10/506959



(43) International Publication Date
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number
WO 2003/077973 A3

(51) International Patent Classification⁷: A61M 5/20, 5/30

(21) International Application Number:
PCT/EP2003/002876

(22) International Filing Date: 18 March 2003 (18.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0206560.5 20 March 2002 (20.03.2002) GB

(71) Applicant (for all designated States except US): GLAXO
GROUP LIMITED [GB/GB]; Glaxo Wellcome House,
Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ANDERSON, Gre-
gor, John, McLennan [GB/GB]; GlaxoSmithKline, Park

Road, Ware, Hertfordshire SG12 0DP (GB). MITCHELL,
John [GB/GB]; Indes Design Consultants, Studio 1D/1F,
Leroy House, 436 Essex Road, London N1 3QP (GB).

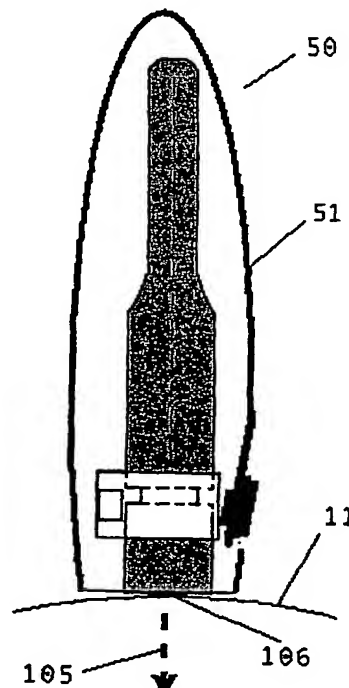
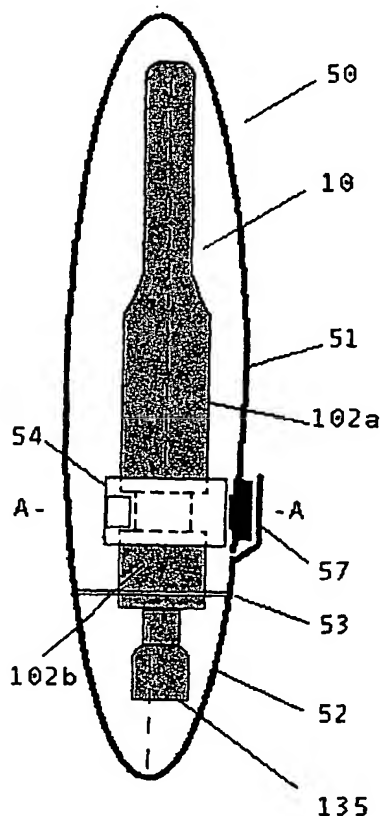
(74) Agent: WALKER, Ralph, Francis; GlaxoSmithKline,
CIP (CN925.1), 980 Great West Road, Brentford, Middle-
sex, TW8 9GS (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: CASING



(57) Abstract: A casing (50) for an injection device (10) of the type having a safety device which prevents operation of the device (10), incorporating an actuator means (56) by which the safety means of the device (10) can be actuated to allow operation of the device (10). Also a casing (50) for a medicament container having an opening closed prior to use by a break-off tip (135), having relatively moveable first and second casing parts (51, 52), which on relative movement apply a breaking force to the break-off tip (135). A preferred embodiment includes both such features.

WO 2003/077973 A3



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
23 September 2004

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M5/20 A61M5/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/24398 A (WESTON MEDICAL LTD ;WESTON TERENCE E (GB)) 15 August 1996 (1996-08-15) figures 1-6	1-3,6-11
A		5
X	US 2001/031945 A1 (LIST HANS ET AL) 18 October 2001 (2001-10-18) figures 4,5,7	1-3, 8-13, 19-21, 23-26,30
A		5,16

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

14 July 2004

Date of mailing of the international search report

26. 07 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Schultz, O

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97/37705 A (WESTON MEDICAL LTD ;WESTON TERENCE E (GB)) 16 October 1997 (1997-10-16) cited in the application figures 1-2C	1-4, 7, 9-11
A	-----	15
A	US 2001/004681 A1 (LANDAU SERGIO) 21 June 2001 (2001-06-21) cited in the application figures 1-3,5	1,9
A	----- US 5 865 795 A (MULHAUSER PAUL ET AL) 2 February 1999 (1999-02-02) cited in the application figures 1,3-8 -----	1,9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/02876

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18

A casing incorporating an actuator and enclosing a device comprising a cartridge, a drive means, a trigger means, a safety means whereby acting on the actuator means results in bringing the safety means of the injections device into a second configuration allowing a trigger means to be operated and causing the drive means to start the injection of the medicament.

2. claims: 19-30

A container of a medicament is closed prior to use by a break-off tip. Via a relative movement of two casing parts enclosing the container a force is applied to the break-off tip breaking the tip off from the container.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

/EP 03/02876

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9624398	A	15-08-1996	AU 4494196 A WO 9624398 A1	27-08-1996 15-08-1996
US 2001031945	A1	18-10-2001	AU 743816 B2 AU 1973401 A BR 0100561 A CA 2331030 A1 CN 1308970 A EP 1125593 A1 JP 3420215 B2 JP 2001224684 A ZA 200100810 A	07-02-2002 06-09-2001 09-10-2001 16-08-2001 22-08-2001 22-08-2001 23-06-2003 21-08-2001 16-08-2001
WO 9737705	A	16-10-1997	AT 231402 T AU 716237 B2 AU 2038797 A BG 102807 A BR 9708767 A CA 2251256 A1 CN 1220613 A CZ 9803266 A3 DE 69718631 D1 DE 69718631 T2 EP 0892648 A1 ES 2191822 T3 WO 9737705 A1 HU 9902139 A2 ID 16590 A JP 3450012 B2 JP 2000508189 T KR 2000005273 A NO 984720 A NZ 332232 A PL 329187 A1 RU 2171119 C2 SK 139398 A3 TR 9802021 T2 US 6135979 A ZA 9703011 A	15-02-2003 24-02-2000 29-10-1997 30-04-1999 03-08-1999 16-10-1997 23-06-1999 14-04-1999 27-02-2003 18-12-2003 27-01-1999 16-09-2003 16-10-1997 29-11-1999 16-10-1997 22-09-2003 04-07-2000 25-01-2000 09-10-1998 30-08-1999 15-03-1999 27-07-2001 10-03-1999 18-01-1999 24-10-2000 25-05-1998
US 2001004681	A1	21-06-2001	US 6264629 B1 US 6096002 A AU 2996700 A BR 0008959 A CA 2368142 A1 EP 1202762 A1 WO 0048654 A1 US 6572581 B1	24-07-2001 01-08-2000 04-09-2000 13-02-2002 24-08-2000 08-05-2002 24-08-2000 03-06-2003
US 5865795	A	02-02-1999	NONE	